save for "nervousness" on her mother's side. Personal history unimportant save that she was delicate as a child. At fifteen years of age, suddenly lost the use of her left arm and left leg. Was for a time unable to walk. She was compelled to remain in bed and also lost her voice. Subsequently complete recovery ensued.

Present trouble began with loss of voice in November, 1906, which persisted until May, 1908. At this time she recovered her voice but became unable to walk because of paralysis of the left leg.

*Present Condition.*—Examination discloses areas of painful hysterical hyperesthesia over the spine, over the inframammary and over the inguinal regions. No palsies or atrophies or other evidences of organic disease.

Examination of the eyes negative.

*Gait.*—When asked to walk, patient sways for a few minutes and then puts her right foot forward. When about to bear the weight on the right leg, it flexes at the knee and the patient appears as if she were going to fall on the right side of the body; but with the same ease as she appears to fall she regains her erect position and repeats the same step. She states that she can walk a considerable distance with this awkward gait. Patient states that it is the left leg that is paralyzed but yet curiously it is the right leg which gives way and upon which she falls. She puts the left foot forward quite readily and bears her weight upon it, evidently without the least trouble.

## ASSOCIATION AND REENFORCEMENT IN APHASIA

By F. X. Dercum, M.D.

Dr. Dercum briefly presented a patient suffering from pseudo-bulbar palsy and several patients suffering from aphasia. He called attention first to the very close relation existing between the anarthria of pseudo-bulbar palsy and the anarthria in motor aphasia. Secondly to the emotional reaction noted in the case of pseudo-bulbar palsy, namely, a tendency to laugh and a similar tendency to laugh in one of the motor aphasics. He then called attention to the intellectual deficit presented by the aphasics. First the general intellectual deficit as exhibited by the aphasics in their inability to carry out consecutively a series of instructions, this failure depending in part upon weakness of memory, impairment of judgment and especially upon impairment of association. Secondly he pointed out that the special intellectual deficit of the aphasics, namely, the failure of the power to comprehend language, is largely dependent upon a defect of the power of association, that is, the power of combination of the auditory impressions, in such a way as to give rise to the conception of the object named. The impairment in the power of association is often revealed in other ways than by the tests of Marie, as by the inability to recognize the qualities of an object, these qualities being named separately. The qualities may be such as are perceived by the sense of sight or such as are perceived by the sense of touch, but are habitually and intimately associated with articulate sounds, *i. e.*, words. The simplest tests are those made by touch and sight association. In tests so made, it is noted that the percentage of failures on the part of the patient is very great, the man having lost the power of associating the qualities of the object when these are communicated by sound, so as to form a conception of the object. In keeping with this it is noted in proportion as the aphasia is pronounced, adjectives and adjective phrases indicating qualities and prepositions indicating relations of one object to another and verbs conveying relations of time and for that matter of space, are imperfectly if at all comprehended. Distinctions of tense are almost always lost even in mild aphasics.

Phenomena of reënforcement may occasionally be demonstrated, as is well known when impressions are made simultaneously upon a number of sensations so that by a combination of many qualities, a recognition of an object may be brought about. Reënforcement is often witnessed also as a result of excitement and often occurs spontaneously during the examination. For instance, in an aphasic whose language is limited to the word "yes," imperfectly pronounced, and when repeatedly urged to say "no" failed, until finally his face flushed, and shaking his head violently, he cried out, "I can't say no," enunciating the words quite distinctly. Reënforcement is manifested in other ways; sometimes words and phrases are uttered in the course of an examination, an interval having elapsed after the patient has been urged to name an object or pronounce a word. The instance of singing aphasics is also to be explained on the ground of reënforcement. It is also noted in aphasics who can count well in series; that is, when once started, from one on, that they frequently cannot name a number independently or separately.

Dr. Mills said in a paper which he had published several years ago on "The Treatment of Aphasia by Training" and in connection with which Dr. Weisenburg assisted Dr. Mills in the training of one or two patients, he called attention to one phase of the subject which Dr. Dercum had emphasized to-night regarding the peculiar manner not only in which language was broken up, but also in which it was regained. In this paper he called attention to both the loss and recovery of different parts of speech—prepositions, conjunctions, adjectives, participles, adverbs, nouns and verbs. He found in some cases that such auxiliary verbs as "is" and "was" especially were often to the patient as if they had never existed. The way of putting the question of intellectual deficit as presented by Marie, he thought misleading. It was presented to us as if it were something new and different from the views held by those who believed in the classical idea of aphasia. Of course, there is intellectual deficit in aphasia, a deficit which depends upon the destruction of what we choose to call centers and of the association tracts between these centers and between them and other parts of the brain. It is a deficit which is distinctly related to the impairment of cerebral speech or language. Much has been done by Marie, Dercum and others in adding to our knowledge of details in the discussion of aphasia. It seemed to Dr. Mills that the aphasic in his misunderstanding of what is said to him might in a sense be compared to a deaf man or partially deaf man in his misunderstanding of what is said to him, although the comparison cannot be carried too far. The higher psychic functions of the aphasic are not affected except in so far as these are cut off from the visual, auditory, motor and other speech centers. The intellectual deficit, while it may exist, is often not as great as it appears to be.

Dr. Dercum said he could not agree with Dr. Mills. Dr. Mills's comparison of an aphasic to a deaf person seemed unfortunate. The deficit is a psychic deficit, not a physical deficit. The mental impairment is both general and special. The special mental impairment consists of the failure to recognize words as indicating definite things or qualities. Further, the failure to associate articulate sounds properly so that neither adequate conceptions of objects named nor of their relations to each other can be formed, is certainly a psychic impairment.

Dr. Mills said he fully believed that.

Dr. S. D. Ingham reported two cases of encephalitis with necropsy (to be published in this journal).

## TUMORS OF THE LATERAL AND THIRD VENTRICLES

By T. H. Weisenburg, M.D., and W. F. Guilfoyle, M.D.

So far as known by the writers the proper diagnosis of tumors of the lateral and third ventricles has not been made in life. This is because of the variance of the size of the tumor and the fact that there can be no specific symptoms with the exception of those which result from pressure. The two cases reported are as follows:

Case I.—A girl of 20 with a history of rheumatism began to gradually lose vision. This was accompanied by flashes of light and double vision. Very soon afterwards, she complained of headache which was occipital and frontal, nausea, vomiting and dizziness. She had several convulsions which involved the left limbs, especially the left arm, and during which time the arms and head were deviated to the right. Soon afterwards she began to complain of pains all over her body and especially of flushes of heat and prickly sensation in the legs, shoulders and back, and later on of the left arm. These symptoms increased in severity. The vision became completely lost, choked disc developed on both sides and this was later followed by optic atrophy. Mercurial inunctions were of no value. About two months after the beginning of her symptoms, she developed a slight ptosis of both eyeballs, more of the right. About five months after the beginning of the symptoms the pupils were unequal, of normal size, and the reactions to light and movement were lost. There was a marked exophthalmos of both eyeballs, more on the right. Both upper lids drooped. The axis of the eyeballs was directed downwards on an angle of 45°. There was complete paralysis of associated ocular movement upwards, less to the right, still less to the left, and less so downwards. Convergence was lost in all directions, excepting in a downward median direction, and in this only an attempt was noticeable. The right motor fifth nerve was paretic throughout. The lower portion of the right seventh nerve seemed weak. Taste was lost on the right side of the tongue, and smell was perverted. Hearing tests were unsatisfactory. The upper and lower limbs were weak, and the left limbs somewhat ataxic, although this was never satisfactorily demonstrated. Later in the disease, the left limbs, especially the upper became distinctly weak. Sensation at no time was disturbed anywhere over the body. Incontinence of urine and feces developed. The mentality of the patient gradually became worse. The pains and flushes of heat were constantly complained of and erythematous and acneiform eruptions which were not persistent appeared. Hallucinations of sight and hearing developed, and the ocular symptoms persisted to the end. There was no difficulty at any time in talking and swallowing, but she would at times yell without provocation.

At necropsy a large tumor was found occupying the whole of the left lateral ventricle and compressing the caudate and lenticular nuclei, the optic thalamus and the internal capsule.

Case II.—A girl of 17 with an excellent family and past history and with no previous history of any disease, had stoppage of her menstruation. She then began to complain of weekly frontal headaches which were not very persistent but which three months afterwards began to be severe, lasting all day and were more marked on the right side of the head and